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ABSTRACT

This booklet, part of a course for teaching English to adult Francophones, is designed to assist the student in learning to produce the "th" sound in English. The voiceless and voiced "th" sounds are described, articulation techniques for both sounds are presented, and listening discrimination and production exercises are provided. A special section treats the difficulty of these sounds in consonant clusters. (AM)

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ED166979

Sound Production: th

by Howard B. Woods

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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This booklet forms part of *Contact Canada,* a course for teaching English to adult Francophones in the Public Service of Canada.
See in particular other books in this phonological series by Howard B. Woods, M.A., B.Sc.:
Rhythm and Stress
Syllable Stress
Intonation
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Sound Production: h
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PSYCHOLOGICAL FACTOR

To our students, the hissing noise of air passing through gaps in their teeth is not a desirable signal in communication. Nearly everyone has learned to master a large number of sounds (usually 40 to 50) in their own language while at the same time learning to eliminate or inhibit all other noises.

We are now asking the student to give up this hard won communicative control to make strange sounds which are meaningful in English but are only noises in French. This psychological factor may take days or even years to overcome.

What is the 'th' sound /ɵ/ ?

The 'th' sound in English is not a special kind of / t / or a combination of a / t / and an / h /. It is a separate and distinct consonant sound similar to the / f / and the / s /[1]. It is represented in the International Phonetic Alphabet as a 'ɵ'.

It is a fricative

This means that the sound continues for a longer period of time than many other consonants. Like the / f / or the / s /, the / ɵ / can be pronounced for as long as you have breath remaining. As a point of contrast, it should be demonstrated, and understood that a / p /, a / t /, or a / k / can only occur for a split second.

It is voiceless

While this sound is being pronounced, the vocal cords do not vibrate. The difference between a voiceless and voiced sound can easily be demonstrated by comparing an / s / which is voiceless with a / z / which is voiced. Hold your Adam's apple to feel the vocal cords vibrate while pronouncing a / z / and feel the lack of vibration while pronouncing an / s /.

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[1] Back in history, one letter was written to represent this sound. It was the þ (called thorn). However after the Normans conquered and ruled England, the þ (thorn) was replaced with the 'th' in an attempt to make the lowly English language more closely resemble the more prestigious Latin, Greek and French languages.

It is dental

It is most often produced by softly placing the tongue against the back of the upper front teeth so that the tip of the tongue touches the cutting surface of the upper teeth[2]. This sound actually has a wide range of articulation which can vary from the inter-dental position to the alveolar ridge. It is almost never pronounced with the tongue sticking way out of the mouth.

It is lax

The tongue is light, loose, and relaxed. Compared to the French / t /, it is produced with far less pressure of the tongue against the teeth.

Characteristic Sound

The characteristic sound of the / θ / is that of air under pressure escaping through narrow spaces between the teeth and between the tongue and teeth.

[2] This is nearly the exact position of the French / t / which is also dental. If we can get our Francophone students to relax the tongue contact of their / t / and to produce a fricative (by blowing air), they will produce the English th / θ /.

How is the 'th' sound /θ/ made?

The 'th' sound / θ / is produced by lightly placing the tip of the tongue between the front teeth. The tongue should be relaxed and need not protrude beyond the cutting edge of the upper teeth. Notice that the tongue-to-teeth contact is made all the way around. The air escapes from the spaces between the teeth or between the tongue and teeth.

Shaded areas here indicate light tongue-contact.

The lips should be pulled back and away from the tongue and front teeth so that no noise will be made by the lips. This can be accomplished by smiling.

Now with your tongue and lips in a ready position, breathe in through your nose and blow out through your mouth. Practise this

several times. Remember to keep the tip of the tongue in contact with the cutting edge of the two front teeth.

If you look in a mirror, you should be able to see the tip of the tongue touching the cutting edge. The air that you are blowing will escape above the tongue either between the teeth or between the tongue and teeth, wherever space occurs.

Keep blowing; that is to say make the sound last a long time. This is a sound which should last 4 to 5 times longer than a / t /. The t sound takes only a split second to explode and then it is gone forever, whereas the / θ / can last as long as you have air.

IN A WORD

Now let's put this / θ / sound in a word. The simplest word to learn is probably the word 'thin'. Instead of trying to pronounce the word all at once, let's divide up the word and gradually reduce the time span between the parts.

THIN

θ ←——— 3 sec ———→ in

θ ←——— 2½ sec ———→ in

θ ←——— 2 sec ———→ in

θ ←——— 1½ sec ———→ in

θ ←——— 1 sec →in

θ ← ½ →in

θin

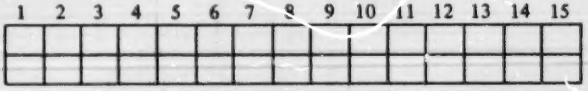
Take any other / θ / word apart and gradually build it together again.

t versus /θ/

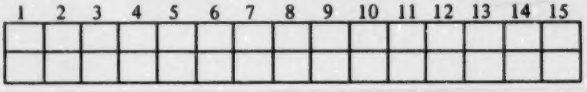
LISTENING DISCRIMINATION EXERCISES

The teacher will pronounce a series of minimal pairs and you will mark in the appropriate boxes according to what you hear. The teacher may want to record these sequences in order to avoid confusion as to what was actually pronounced.

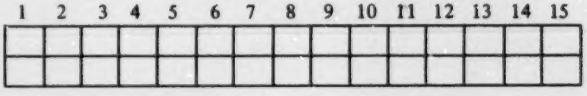
a) t tin
θ thin



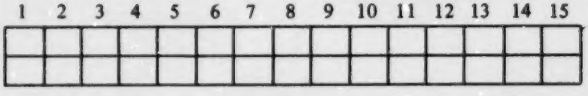
b) t tank
θ thank



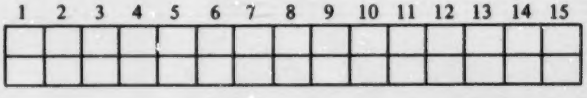
c) t taught
θ thought



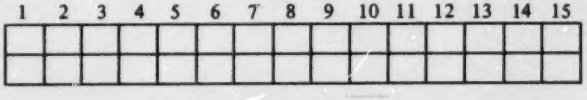
d) t tick
θ thick



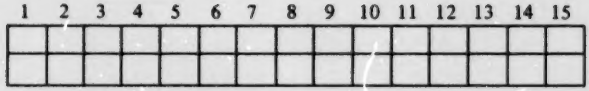
e) t tree
θ three



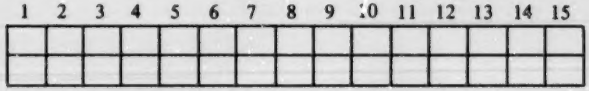
f) t boat
θ both



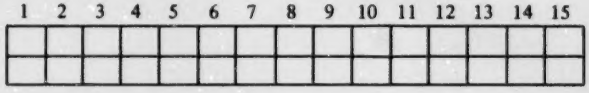
g) t wit
θ with



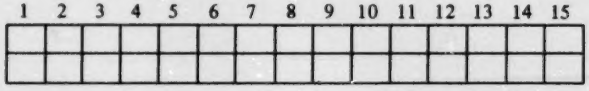
h) t boot
θ booth



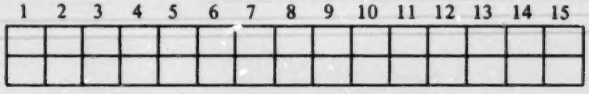
i) t bat
θ bath



j) t toot
θ tooth



k) t nutting
θ nothing



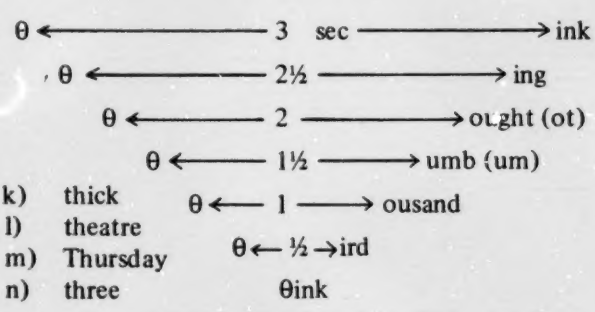
Now reverse the roles; a student will pronounce the words and the teacher and students will mark the boxes according to what they hear.

PRODUCING THE / θ /

A. Word Initial Position

Practise pronouncing the voiceless 'th' sound / θ / in word initial position, it may make sense to divide the difficult words into separate sounds first:

a) thin
b) think
c) thank
d) thing
e) thought
f) thumb
g) thousand
h) third
i) thirty
j) thirteen
k) thick
l) theatre
m) Thursday
n) three



6

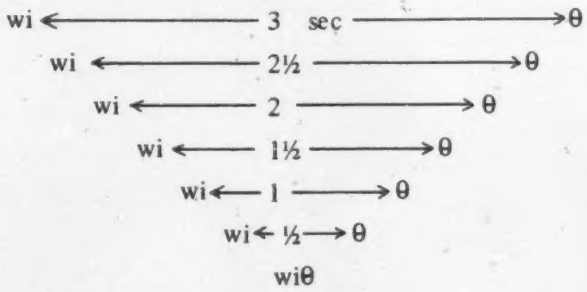
SENTENCES

1. He's skating on pretty thin ice.
2. I think you're right.
3. I meant to thank him.
4. That's one thing we can't forget.
5. I thought that was the wrong number.
6. Paul cut his thumb.
7. Did you camp in the Thousand Islands National Park?
8. The third test is much easier.
9. She's thirty years old.
10. My daughter is thirteen.
11. She's very thorough.
12. Susan likes thick shakes.
13. The theatre will re-open soon.
14. Next Thursday is a holiday.
15. Three new teachers have just reported for duty.

B. Word Final Position

Practise pronouncing the voiceless 'th' sound / θ / in final position, again you may want to divide the words as on pages 4 and 6.

a)	with	g)	north	m)	10th
b)	both	h)	bath	n)	twentieth
c)	south	i)	math	o)	thirtieth
d)	mouth	j)	4th	p)	breath
e)	month	k)	5th	q)	width
f)	booth	l)	6th	r)	length



SENTENCES

1. She's in Calgary with a friend.
2. Both of them left on Wednesday.
3. I'm going south for Christmas.
4. He's got a big moutn.
5. Which month were you born in?
6. Please take another booth.
7. There's no city north of Ottawa-Hull.
8. I took a bath last night.
9. You're pretty good at math.
10. Terry used to live on 4th Ave.
11. I've lost my breath.
12. What's the width and length of that bookcase?

Exercise: Change the following adjectives and verbs to nouns ending in 'th': wide, long, deep, broad, strong, true, warm, grow, die. Now make sentences using these words.

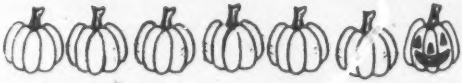
Exercise:

Which girl
is wearing the shortest skirt?

What's different about
one of these houses?

What's different about
the 6th camel?

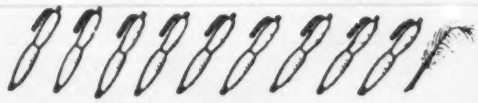
Which pumpkin is different?



Which egg is cracked?

What's wrong
with the 9th flower?

Which pen is different?



C. Word Medial Position

Practise pronouncing the voiceless 'th' sound / θ / in word medial position:

a) nothing
b) everything
c) anything
d) healthy
e) wealthy
f) mathematics
g) worthwhile

no ⟷ θ ⟷ ing
no ⟷ θ ⟷ ing
no ⟷ θ ⟷ ing
no ⟷ θ ⟷ ing
no ⟷ θ ⟷ ing
no θ ing

SENTENCES

1. There's nothing wrong with that.
2. Everything is getting out of control.
3. Is there anything I can do to help?
4. That's a healthy point of view.
5. Wealthy people have a lot of influence.
6. She is studying mathematics.
7. That makes everything worthwhile.

. . . Some of our students have noticed that this / θ / sound very closely resembles their imitation of a lisp. It may be a useful technique to mention this when introducing the / θ /. Imitate a lisp in the following words: façon, savoir, fils.

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ð What is the 'th' sound /ð/ ?

The 'th' sound / ð / is another consonant sound represented in English writing by the letters 'th'.

Just as with the / θ /, this sound has nothing to do with a / t / sound or an / h / sound or a combination of the two. It is a separate and distinct consonant sound similar to the / v / and the / z /[3]. In the International Phonetic Alphabet, it is represented as an 'ð'.

It is a fricative

The / ð / sound can be pronounced or held for as long as one has breath; this characteristic makes it a fricative.

By way of contrast, the / d / sound can only be pronounced for a split second and then it is finished. (The / d / is called a 'plosive' or a 'stop'.)

It is voiced

The vocal cords vibrate when the sound is made.

[3] Before the Norman conquest, this sound was represented in writing with the / ð / (called eth). As was the case for the þ (thorn), the change to the Latin spelling obliterated the phonetic relationship of one sound having one symbol and one symbol having one sound.

It is dental

This sound is produced by lightly placing the tip of the tongue against the cutting edge of the upper front teeth. The rims of the tongue are inter-dental all the way around. In continuous speech this sound is frequently produced at the alveolar ridge.

It is lax

The tongue is relaxed. Compared to the French / d /, it is produced with far less pressure of the tongue against the teeth. Compared to the English / θ /, there is less air pressure.

Characteristic Sound

The characteristic sound of the / ð / is the hum of the vocal cords plus the turbulence of the / θ / sound.

17

How is the 'th' sound /ð/ made?

The 'th' sound / ð / is made by softly placing the tip of the tongue between the front teeth. The tongue should be relaxed and should not protrude beyond the cutting edge of the upper teeth. The lips should be pulled away from the teeth so that no noise is made by them. Blow air out between your teeth or between the tongue and teeth.

VOCAL CORD CONTROL

To practise controlling the vibration of the vocal cords, take a deep breath and pronounce / z / ... then / s / ... then / z / ... then / s / shifting back and forth without breathing in or stopping. Now inhale deeply and without interruption pronounce / v / ... / f / ... / v / ... / f / ... / v /. In both cases, the tongue and lips remain in the same position while the vocal cords are "turned on" and "turned off".

Put your finger on your Adam's apple to feel

1) the vibration during the / z / and / v / sounds and
2) the lack of vibration for the / s / and / f / sounds.

Put one finger in each ear to hear a buzzing when the vocal cords vibrate.

Now pronounce / θ /, and add vibration to the vocal cords to produce the / ð /. Inhale deeply and alternately pronounce / θ / . . . . / ð / . . . / θ / . . . . / ð / . . . . / θ / . . . . / ð / . . . . / θ /.

IN A WORD

Now, let's pronounce this / ð / sound in a word. Let's try the word 'that'. Do not attempt to pronounce the word in one shot, but let's split the word and gradually reduce the interval between the two parts.

ð ← 3 sec → at

ð ← 2½ → at

ð ← 2 → at

ð ← 1½ → at

ð ← 1 → at

ð ← ½ → at

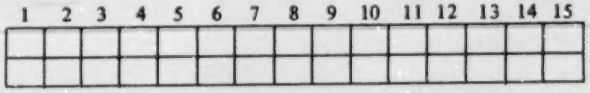
ðat

d versus /ð/

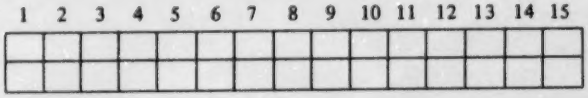
LISTENING DISCRIMINATION EXERCISES

The teacher will say one of the following minimal pairs, you will mark what you hear.

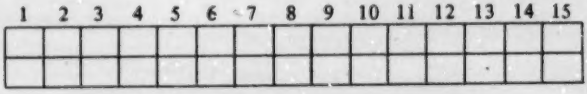
a) d day
ð they



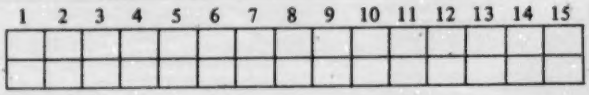
b) d den
ð then



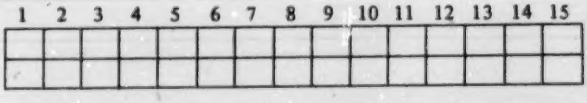
c) d d's
ð these



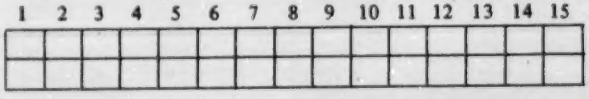
d) d dare
ð there



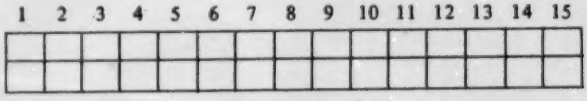
e) d dough
ð though



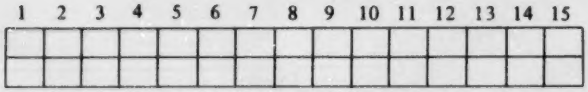
f) d doze
ð those



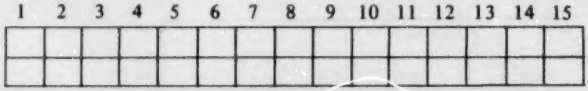
g) d fodder
ð father



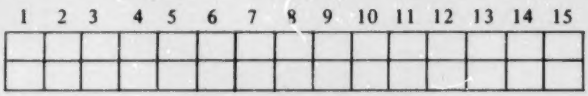
h) d ladder
ð lather



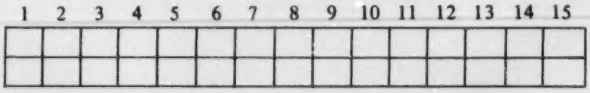
i) d eider
ð either



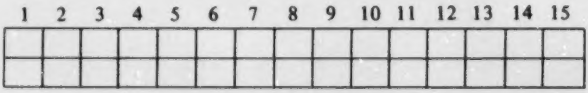
j) d breed
ð breathe



k) d sued
ð soothe



l) d laid
ð lathe



Now you will say one of the preceding minimal pairs and your teacher and other classmates will mark what they hear.

THE CONSONANT / ð /

A. Word Initial Position

Practise pronouncing the voiced 'th' sound / ð / in initial position.

a) the
b) this
c) that
d) these
e) those
f) there
g) then
h) than
i) they
j) their
k) theirs
l) therefore
m) though

ð ← 3 sec → en
ð ← 2½ → en
ð ← 2 → en
ð ← 1½ → en
ð ← 1 → en
ð ← ½ → en
ðen

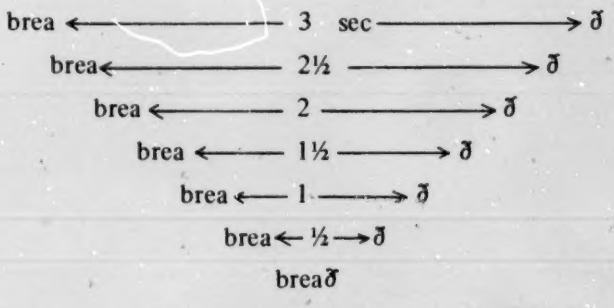
SENTENCES

1. The dog is shedding its fur.
2. Those trees are dead.
3. There are 70 departments in the Federal Government.
4. Prices were lower then.
5. Lake Winnipeg is larger than Lake Ontario.
6. They are going to be sorry.
7. I recommended them.
8. That's their problem.
9. Our house is gray; theirs is white.
10. There was a snow storm; therefore the school closed down.
11. It's not what I expected but it's pretty good though.
12. This sound is difficult.
13. The teacher said that that answer was wrong.
14. These directions are contradictory.

B. Word Final Position

Practise pronouncing the voiced 'th' sound / ð / in final position.

a) breathe
b) bathe
c) soothe
d) smooth
e) teethe
f) lathe



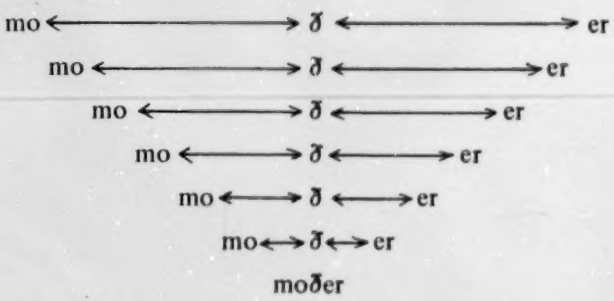
SENTENCES

1. When meditating one tends to breathe deeply.
2. The father loves to bathe his new-born child.
3. This heating pad will soothe your back.
4. Silk feels very smooth.
5. These children have a fever everytime they teethe.
6. A carpenter uses a lathe.

C. Word Medial Position

Practise pronouncing the voiced 'th' sound / ð / in medial position.

a)	mother	e)	another	i)	bother	m)	southern
b)	father	f)	either	j)	whether	n)	leather
c)	brother	g)	neither	k)	weather	o)	lather
d)	other	h)	rather	l)	northern	p)	heather



SENTENCES

1. My mother lives at 6211 Elmwood Street.
2. My father lives at the same address.
3. My brother moved to Calgary last spring.
4. She prefers the other dessert.
5. There must be another way.
6. I didn't like the soup either.
7. Neither answer is correct.
8. The other class is rather loud.
9. Don't bother me.
10. I wonder whether that's true.
11. The ship weathered the storm.
12. German is spoken in northern Switzerland.
13. Italian is spoken in southern Switzerland.
14. A football is made of leather.
15. Some of the lather got into his eyes.
16. Scotland is famous for its heathers.
17. Either close the door or leave.

/θ/ *and* /ð/

DIFFICULTIES IN CONSONANT CLUSTERS

The 'th' sounds / θ / and / ð / are usually the last sounds an English speaking child learns to master. These sounds are especially difficult when clustered with other consonants such as / r /, / n /, / s /, and / z /. Some of the most difficult words with / r / are: three, throw, threat, thread, thrash, threshold, threw, thrift, thrill, thrive, throat, throb, throne, throttle, through, thrush, thrust. Unfortunately these words have to be articulated fully. However, there are a few words which drop the 'th' sound in different clusters, these are clothes / klouz / and months / mʌns / and others which, in continuous speech, frequently drop the 'th' sound, e.g. sixths / siks s /, fifths / fIfs s /, tenths / tɛns s /.

θ BECOMES ð IN SOME PLURALS

In the following nouns, the 'th' sound / θ / sometimes becomes / ð / in the plural form: bath, booth, broth, cloth, moth, mouth, oath, path, truth, wreath, and youth.

FINAL EXERCISE (MIXED)

1. Pollution has become a big problem in the twentieth century.
2. I didn't see him do that!
3. I think he's sick.
4. I've already said it three times.
5. Yesterday I bought a new leather coat.
6. Nothing went right today.

7. Neither of them is ready.
8. I'm all out of breath from running.
9. You can't breathe under water, can you?
10. I thought you should have thanked him.
11. Both of you are going to have to keep quiet.
12. Our prime minister is a very wealthy man.
13. Anthropology is the study of man.
14. Calculate the width of the table in meters.
15. Water will quench your thirst.
16. That's theirs over there.
17. Father is going to the show with mother.
18. Smooth ice is the best for skating.
19. I loathe mushrooms.
20. Have you ever seen the Northern Lights?
21. Many people would go south every winter if they had the money.
22. My house is the fourth one from the end.

Conclusion

The student has now had an introduction to the pronunciation of the 'th' sounds. It is our responsibility as teachers to assure that the student can produce the sounds in isolated words and in controlled sentences. This ability, hopefully, will enable the student to stop and repeat a word correctly and confidently if he fumbles the pronunciations while conversing.

After the student has mastered the sounds in isolation, it should probably be left up to the student's own motivation as to when and how frequently he will allow himself to mispronounce these sounds. The teacher should point out that mispronunciation of an unstressed word is far less important than a mispronunciation in a stressed word.

Rather then spending more time and energy on sentences and drills for practicing the 'th' sounds, we suggest that the students and teachers pay special attention to these sounds while they take part in discussion and activities related to various thematic materials.

. . . The students might be interested to know that some speakers from Maritime dialectic areas do not pronounce the 'th' sounds but substitute / t /s and / d /s as our French Canadian students invariably do.

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